

REMARKS/ARGUMENTS

Claims 1-20 remain in the application. Claims 1, 11, 13-15 and 17-20 have been amended to correct antecedent basis issues under 35 USC 112. No new matter has been added.

Claim Objections

Claims 1, 11 and 13-14 were objected to for insufficient antecedent basis of various limitations. Applicant submits that the present amendment corrects these objections and proactively addresses additional antecedent basis issues in the claims.

Claim Rejections – 35 UCS 103

Claims 1-17 and 19-20 were rejected under 35 USC 103(a) as being obvious over U.S. Patent Publication No. 2004/0039312 to Hillstead et al. in view of U.S. Patent No. 5,907,395 to Schulz et al. Applicant respectfully traverses these rejections based upon the following remarks.

As a whole, Hillstead et al. discloses a system for ultrasonic treatment and imaging of adipose tissue (i.e., fat) wherein a 7.5 MHz ultrasonic system is used to map the thickness of fat to produce a skin “fingerprint” containing contours of constant fat thickness. The fingerprint is then used to develop a treatment plan using HIFU beams to destroy/remove fat selectively. Hillstead et al. specifically teaches that a HIFU transducer/probe “is applied to the patient” and that, with respect to the reference frame for controlling the HIFU beam, “[t]he best reference is the skin of the patient, to which the subcutaneous fat is attached.”

In this regard, Hillstead et al. teaches that grid lines or the like can be printed on the skin to aid in determining position location of a HIFU transducer. Alternatives to the use of such printed grids include skin-feature detection (imperfections in the skin), relative motion sensing along the skin (such as rolling of mouse-type ball along skin), and marking of the skin with color-absorbing dye. Each of these alternatives is based upon *the skin as a reference* due to placement of the transducer directly on the skin (see e.g., figs 2, 15A, 15B). Indeed, because the transducer in Hillstead et al. is directly

applied to the patient, sensors (see fig. 2) can be mounted on the transducer and directly detect position information from the skin, thus *avoiding the need* for a separate reference system and camera array such as taught by Schulz et al. for positioning purposes. Because there is *no need for a separate reference frame and camera array* in the system of Hillstead et al., one of ordinary skill in the art at the time of the invention would have had no need or motivation to modify Hillstead et al. to include a separate reference frame – absent impermissible hindsight.

While Applicant understands that, in accordance with MPEP 2145, that "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper," *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971), this requirement for a finding of obviousness is not supported by the facts in this case. Indeed, in order to modify Hillstead et al. to use the LED emitter system of Schulz et al., one would necessarily need to change the principle of operation of Hillstead et al. from probe-mounted sensor operation to external camera array operation, which is impermissible under MPEP 2143.01 (see *n re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Further, modifying Hillstead et al. in this manner would make Hillstead et al. unsuitable for its intended purpose of removing adipose tissue since the use of body-mounted emitters would clearly interfere with the positioning of the HIFU probe. Therefore, since the combination cited in the Office Action would require both changing the principle of operation of one reference and render that reference unsuitable for its intended purpose, the combination of Hillstead et al. with Schulz et al. is impermissible under MPEP 2143.01 (see *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

As a whole, Schulz et al. teaches an improved point source emitter for 3-D position detection. However, it does not suggest use with (or in place of) a skin-based reference system such as Hillstead et al. Further, Schulz et al. does not teach or fairly suggest the disposable support element of claim 1, the disposable support that is

substantially unaffected by bodily excretions of claim 5, the LED's and receiver each disposed at an angle of about 45° with respect to the place where said body will be placed of claim 14, the emitters being operatively associated with wedge shaped members of claim 15, or the wedge shaped members having adjustable angles of claim 16.

While the Office action has alleged that certain figures show a 45° as required by claim 14, no such disclosure is found in Schulz et al., which merely discloses a stylus or probe 14 with surface-mounted emitters and sensor assembly 30 in approximately the same plane. Similarly, with respect to the wedge shaped members of claim 15, the Office Action mentions figures 4, 5, and 7 as allegedly disclosing "emitters (26)...operatively associated with wedge shaped member [sic]..." However, Applicant respectfully submits that the optical elements or light modifiers of figures 4, 5, and 7 do not qualify as wedge shaped support members within the meaning of the terms as reasonably interpreted under MPEP 2111 since they are neither supports nor wedge shaped. Indeed, Applicant respectfully notes that the Office Action completely fails to address the disposable support limitations of the presently-claimed invention. Thus, even if Hillstead et al. is combined with Schulz et al., the resulting combination fails to disclose all of the elements recited in the claims.

Since the combination of Hillstead et al. with Schulz et al. is impermissible and also fails to disclose all claim elements, Applicant submits that claims 1-17 and 19-20 are allowable over the cited references. Accordingly, Application respectfully requests withdrawal of the rejections of claims 1-17 and 19-20.

Claim 18 was rejected under 35 USC 103 as being obvious over Hillstead et al. in view of Schulz et al. as applied to claim 12 and further in view of Makin et al.

Claim 18 has been amended to depend from claim 17 (which provides antecedent basis for "said ultra sound radiation"). Since claim 17 is allowable for the same reasons as submitted above with respect to claim 1, and Makin et al. fails to cure any of the deficiencies noted above with respect to claims 1 and 17, Applicant submits that claim 18 is also allowable over the cited references. Accordingly, Application respectfully requests withdrawal of the rejection of claim 18.

Conclusion

Applicant respectfully submits that claims 1-20 are allowable and requests that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact either of the undersigned regarding any issue related to furtherance of the examination of this application.

Very truly yours,
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